



## The Documented Treatment of a Food Processing Plant, utilizing Expel's Ag-Scent Bacteria.

### Background:

A ready-to-use (RTU) product, made with 10% of Ag-Scent BCC + Enzymes, was used to treat a food processing plant. The plant processes food for airlines. The waste treatment system consists of 4 settling basins. The capacity of the system is 6.5m<sup>3</sup> with a flow rate of 30m<sup>3</sup>/day. This plant was not in compliance with the government established limits for biochemical oxygen demand (BOD) and total suspended solids (TSS). The governmental limits and the starting parameters for this system are listed below in Table 1.

Parameter	Government Limits (ppm)	Starting Level (ppm)
Biochemical Oxygen Demand	300	800
Total Suspended Solids	150	322
Fat, Oil and Grease	300	117

**Table 1. The government limits and starting levels of BOD, TSS, and FOG in the processing plant waste stream**

### System treatment:

The system was shocked by adding 500g of Ag-Scent BCC + Enzymes RTU to each of the four chambers. The system was treated with a maintenance dose of 750g/day for a period of one month.

### Results after one month:

After one month of treatment, the BOD, TSS, and FOG were reduced by 45%, 81%, and 41% respectively. However, the BOD level was still above the government limit of 300 ppm. The data recorded after one month of treatment are shown in Table 2.

### Second month of treatment and results:

After one month of treatment, the BOD was not below the government limit of 300 ppm. Therefore, the dose was increased to 1000g/day for the next month of treatment. After the second month of treatment, all three parameters, BOD, TSS, and FOG, were reduced to a level well below the governmental allowable limits. These data are shown in Table 2.

Parameter	One Month Results (ppm)	Two Month Results (ppm)
Biochemical Oxygen Demand	440	70
Total Suspended Solids	60	38
Fat, Oil and Grease	69	77

**Table 2. Resulting BOD, TSS, and FOG levels after of application of Expel's Ag-Scent bacteria.**

**Summary:**

The use of a ready-to-use product made with 10% Ag-Scent BCC + Enzymes reduced the level of BOD, TSS, and FOG to well below the governmental limits after two months of treatment. The percentage of reduction in BOD, TSS, and FOG at the end of the two month period was 91%, 88%, and 34% respectively. The results of the treatment are shown graphically below. To insure that the government limits are satisfied, the treatment is being continued at the rate of 1000g/day.

**The Reduction of BOD, TSS, and FOG by Semco's Bacteria**

